



1600 South Second Street
 Mount Vernon, WA 98273-5202
 ph 360.428.1617
 tel 800.622.4627
 fax 360.428.1620
 www.nwcleanair.org

Original issuance: June 25, 1991

Revision A: None

Revision B: November 17, 1997

Revision C: August 3, 1998

Revision D: March 27, 2009

Revision E: July 31, 2009

**Northwest Clean Air Agency (NWCAA) hereby issues
 Order of Approval to Construct (OAC) #304e**

Project Summary: Construct a combined cycle, natural gas fired combustion turbine power plant rated at 125 megawatts. Ancillary equipment includes a 3-cell cooling tower and 500 kilowatt standby diesel generator. Nitrogen oxide (NOx) emissions are controlled with steam injection and selective catalytic reduction. This cogeneration plant has the ability to send low pressure steam to Socco Forest Products for use in their kilns.

**O
P
E
R
A
T
O
R**

Sumas Generating Station
 1340 Thompson Lane
 PO Box 220
 Sumas, WA 98295

**O
W
N
E
R**

Puget Sound Energy, Inc.
 PO Box 97034
 Bellevue, WA 98009-9734

FACILITY LOCATION:

1340 Thompson Lane, Sumas, Washington 98295

Permit History

- As of the date of issuance, this Order supersedes NWCAA Order of Approval to Construct #304d dated March 27, 2009.

Note that in addition to other applicable rules and regulations, this project is subject to applicable portions of the following federal regulations.

New Source Performance Standards

- 40 CFR 60 Subpart A — General Provisions
- 40 CFR 60 Subpart GG — Standards of Performance for Stationary Gas Turbines

Acid Rain Program

- 40 CFR 72 through 75 — Acid Rain Provisions

As authorized by the Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:


1. Emissions from the plant stack shall not exceed any of the following:
 - a. Nitrogen oxides:
 - 6 ppm_{dv} corrected to 15% oxygen, calendar day average, ISO standard conditions
 - 18.1 lb/hour, calendar day average
 - 75 tons/year
 - b. Carbon monoxide:
 - 6 ppm_{dv} corrected to 15% oxygen, one-hour average, ISO standard conditions
 - 12.6 lb/hour
 - 52 tons/year
 - Carbon monoxide emissions limits shall apply at all times except during a time period not to exceed two hours during startup.
 - c. Opacity:
 - Not to exceed five percent (5%) at the point of exhaust or within a reasonable distance of that point for more than six minutes in any one-hour period. Opacity shall be determined by U.S. EPA Reference Method 9 or other method approved by the Control Officer.
 - d. Ammonia:
 - 10 ppm_{dv} corrected to 15% oxygen, one hour average, ISO standard conditions
 - 13.3 lb/hour
 - 55 tons/year
2. The following continuous emission monitors shall be installed and operated on the stack:
 - a. Oxygen - in accordance with Performance Specification 3 (40 CFR 60 Appendix B)
 - b. Nitrogen oxides - in accordance with Performance Specification 2 (40 CFR 60 Appendix B)

The continuous emission monitors shall be used for continuous compliance determinations and shall be installed and operated in accordance with NWCAA 367, NWCAA Appendix A and 40 CFR Part 75.
3. A record of the amount of time the turbine is in used shall be maintained. Natural gas consumption for the turbine, and the ratio of steam to fuel being fired in the turbine shall be monitored and recorded.

4. Annual source testing for carbon monoxide (CO) and ammonia (NH₃) emissions shall be conducted for the gas turbine stack using EPA Method 10 and BAAQMD Method ST-1B, respectively. Testing shall be conducted at least once per calendar year. All source testing shall be conducted, and plans and test results submitted in accordance with NWCAA Section 367 and NWCAA Appendix A.
5. The following information shall be reported to the NWCAA on a calendar month basis within 30 days following the end of the previous month.
 - a. Concentration of NO_x in ppm_{dv} corrected to 15% oxygen, calendar day average, and NO_x emissions in lb/calendar day for the gas turbine stack.
 - b. Total MMBtu of natural gas burned in the turbine during the month.
 - c. Number of hours the turbine operated during the month.
 - d. Number of hours the standby diesel generator has operated during the calendar year
6. The combustion turbine shall burn natural gas only, as defined in 40 CFR 72.2.
7. The Cummins Diesel Turbo 500 kW standby generator shall not be operated more than 132 hours in any calendar year.


Dan Mahar, P.E.
Engineer


Mark Buford, P.E.
Assistant Director,
Engineering

 FOR
Lynn Billington, P.E.
Director, Engineering

Revision A: There was no revision A.

Revision B: NO_x limit changed from hourly to a 24-hour average. Remove monthly CO reporting requirement.

Revision C: CO control catalyst may be removed after completion of six months of continuous CO monitoring. Add a 2-hour CO limit exemption during turbine startup.

Revision D: Update with new owner information. Delete obsolete and non-applicable requirements, including removing VOC and PM/PM-10 limits and their initial source test requirements. Add annual source testing for CO and ammonia. Clarify reporting requirements.

Revision E: Remove "pipeline grade" from Condition 6 and add a citation to define "natural gas".